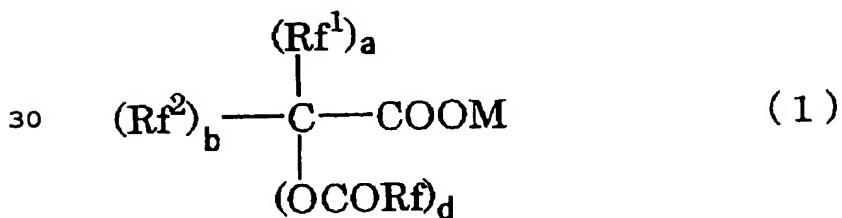


CLAIMS

1. A method of producing a fluoropolymer,
 wherein polymerization using a carboxylate ester bond-
 5 containing carboxylic acid derivative as a surfactant in an
 aqueous medium to give the fluoropolymer is conducted,
 said carboxylate ester bond-containing carboxylic acid
 derivative has a carboxylate ester bond and -COOM (M
 representing H, NH₄, Li, Na or K),
 10 said carboxylate ester bond may optionally be substituted
 by fluorine atom.

2. The method of producing a fluoropolymers according to
 Claim 1,
 15 wherein the carboxylate ester bond is an acyloxy group
 represented by RfCOO- (Rf representing a fluoroalkyl group
 containing 1 to 20 carbon atoms or an ether oxygen-
 containing fluoroalkyl group containing 1 to 20 carbon
 atoms) or an alkoxy carbonyl group represented by RFOCO- (Rf
 20 being as defined above).

3. The method of producing a fluoropolymers according to
 Claim 1 or 2,
 wherein the carboxylate ester bond-containing carboxylic
 25 acid derivative is a 2-acyloxy carboxylic acid derivative
 represented by the general formula (1):



wherein Rf¹ and Rf² are the same or different and each
 35 represents H, F, a fluoroalkyl group containing 1 to 20

carbon atoms or an ether oxygen-containing fluoroalkyl group containing 1 to 20 carbon atoms, a and b each represents an integer of 0 to 2 and d represents an integer of 1 to 3 provided that a, b and d satisfy the relation a +
5 b + d = 3; Rf and M are as defined above, and Rf¹, Rf² and Rf are the same or different.

4. The method of producing a fluoropolymer according to Claim 1 or 2,

10 wherein the carboxylate ester bond-containing carboxylic acid derivative is a dicarboxylic acid half ester (A) represented by the general formula (3):

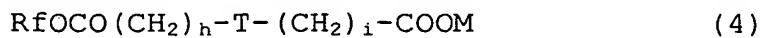


wherein Rf⁵ represents -C_fH_{2f}- or -C_gH_{2g-2}- (in which f

15 represents an integer of 1 to 6 and g represents an integer of 2 to 6) and Rf and M are as defined above.

5. The method of producing a fluoropolymer according to Claim 1 or 2,

20 wherein the carboxylate ester bond-containing carboxylic acid derivative is a dicarboxylic acid half ester (B) represented by the general formula (4):



wherein T represents -CRf⁴=CH-, -CH=CRf⁴- or -CHRF⁴- (in

25 which Rf⁴ represents F, a fluoroalkyl group containing 1 to 20 carbon atoms or an ether oxygen-containing fluoroalkyl group containing 1 to 20 carbon atoms), h and i are the same or different and each represents an integer of 0 to 3, and Rf and M are as defined above.

30

6. The method of producing a fluoropolymer according to Claim 1, 2, 3, 4 or 5,

wherein a 0.1% (by mass) aqueous solution of the carboxylate ester bond-containing carboxylic acid

35 derivative has a surface tension of 30 to 70 Nm/m as

measured at 25°C by Wilhelmy method.

7. The method of producing a fluoropolymer according to Claim 1, 2, 3, 4, 5 or 6,

5 wherein the carboxylate ester bond-containing carboxylic acid derivative can generate a hydrolyzate upon hydrolysis, the number of fluorine atom-bound carbon atoms in said hydrolyzate is not more than 6.

10 8. The method of producing a fluoropolymer according to Claim 7,

wherein the number of fluorine atom-bound carbon atoms is not more than 4.

15 9. The method of producing a fluoropolymer according to Claim 1, 2, 3, 4, 5, 6, 7 or 8,

wherein the carboxylate ester bond-containing carboxylic acid derivative is added at a level of 0.0001 to 15% by mass of the aqueous medium.

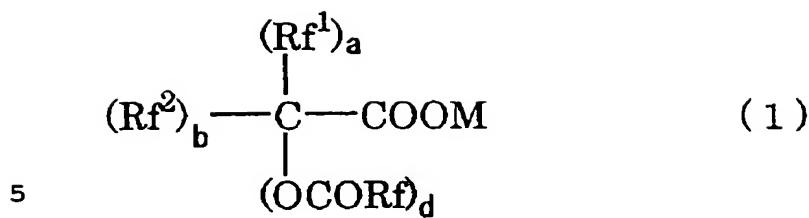
20

10. A fluoropolymer aqueous dispersion which comprises a particle comprising a fluoropolymer, a carboxylate ester bond-containing carboxylic acid derivative and an aqueous medium,

25 wherein said carboxylate ester bond-containing carboxylic acid derivative has a carboxylate ester bond and -COOM (M representing H, NH₄, Li, Na or K),
said carboxylate ester bond may optionally be substituted by fluorine atom.

30

11. A 2-acyloxy carboxylic acid derivative which is represented by the general formula (1):



wherein Rf¹ and Rf² are the same or different and each represents H, F, a fluoroalkyl group containing 1 to 20 carbon atoms or an ether oxygen-containing fluoroalkyl group containing 1 to 20 carbon atoms, Rf represents a fluoroalkyl group containing 1 to 20 carbon atoms or an ether oxygen-containing fluoroalkyl group containing 1 to 20 carbon atoms, M represents H, NH₄, Li, Na or K, a and b each represents an integer of 0 to 2 and d represents an integer of 1 to 3 provided that a, b and d satisfy the relation a + b + d = 3; Rf¹, Rf² and Rf are the same or different.

12. The 2-acyloxycarboxylic acid derivative according to
20 Claim 11,
wherein Rf¹ and Rf² are the same or different and each is
 $A(CF_2)_j(CH_2)_p^-$
wherein A represents H or F, j represents an integer of 1
to 6 and p represents an integer of 0 to 3.

15. The 2-decylcarboxylic acid derivative according to
Claim 11 or 12,
wherein Rf is
 $A(CF_2)_n(CH_2)_m-$
30 wherein A represents H or F, n represents an integer of 1 to 4 and m represents an integer of 0 to 3, or
 $A(CF_2)_q[CFX-CF_2(CH_2)_rO]_tCFX-$
wherein X represents F or CF_3 , q represents an integer of 0 to 3, r represents an integer of 0 to 2, t represents an
35 integer of 1 to 3 and A is as defined above.

14. The 2-acyloxycarboxylic acid derivative according to
Claim 11,

wherein Rf¹ and Rf² are the same or different and each is

5 A(CF₂)_u-

wherein A represents H or F and u represents an integer of
1 to 3, and Rf is

A(CF₂)_w(CH₂)_y-

wherein A is as defined above, w represents an integer of 2

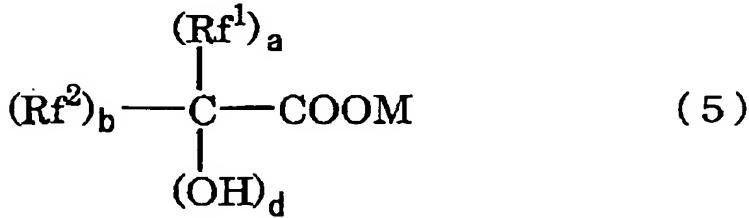
10 to 4 and y represents an integer of 0 to 1.

15. A surfactant which comprises the 2-acyloxycarboxylic
acid derivative according to Claim 11, 12, 13 or 14.

16. A method of producing a 2-acyloxycarboxylic acid
derivative,

which comprises producing the 2-acyloxycarboxylic acid
according to Claim 11, 12, 13 or 14 by esterifying a 2-
hydroxycarboxylic acid derivative represented by the

20 general formula (5):



25 wherein Rf¹ and Rf² are the same or different and each
represents H, F, a fluoroalkyl group containing 1 to 20
carbon atoms or an ether oxygen-containing fluoroalkyl
group containing 1 to 20 carbon atoms, M represents H, NH₄,
Li, Na or K, a and b each represents an integer of 0 to 2
and d represents an integer of 1 to 3 provided that a, b
and d satisfy the relation a + b + d = 3, and an alkanoyl
compound represented by the general formula (6):

35 RfCOZ (6)

wherein Rf represents a fluoroalkyl group containing 1 to 20 carbon atoms or an ether oxygen-containing fluoroalkyl group containing 1 to 20 carbon atoms, Z represents -OM¹ or Y (M¹ representing H, NH₄, Li, Na or K and Y representing F
5 or Cl).